Bank Performance Before And During Crisis Due To Covid-19

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Abstract: We examine the differences in banking performance of CAMEL ratio of government-owned conventional banks in Indonesia, before and during the crisis due to Covid-19 (Q1-Q3 2019 and Q1-Q3 2020). Then we examine the determinants of bank performance itself during those period. Using paired sample t-test, we found that there was no significant difference of CAMEL ratio, before and during crisis. Using panel regression, partially, we found only OEOI, Interest Rates and Economic Crisis have significant effect on bank performance that reflected by ROA & ROE. Simultaneously, all independent variables have significant effect on banking performance that reflected by ROA and ROE.

Keywords: Bank Performance; CAMEL; and COVID-19

1. Introduction

Bank is an institution that is engaged specifically in the field of financial services which plays a vital role in the economy. Without these institutions, financial markets will not be able to move funds from savers to users of funds who have productive investment opportunities. So, banking has an important role in the economy. This role in Indonesia can be seen from the contribution of the Financial Intermediary Services sub-sector in the second quarter of 2020 amounting to 58.64% of the total GDP of the Financial Services and Insurance Sector and 2.45% of the total GDP of Indonesia. Thus, the role of banking institutions can be said to influence economic development and development in Indonesia.

Banking has a complex system, the problems that occur in relatively small banks will cause a trust crisis to the banking institution as a whole, thus encouraging bank panic to happen. In addition, issues concerning problems of potential for an increase in Non-Performing Loans during the pandemic also had a negative effect on trust in banks. Thus, it is no less important to find out whether there are significant differences in banking performance in Indonesia before the crisis (pre-crisis) and during the crisis itself (during crisis).

This study uses bank performance assessment variables of CAMEL (Capital, Asset Quality, Management, Earning, and Liquidity) factors. Winarso (2008) found in his research on Islamic that there were no significant differences in banking performance of CAMEL Ratio before and after the 1998 monetary crisis. However, Mehta (2012) found that all aspects of Profitability, Liqudty, and Financial Leverage had significant differences before and after the global crisis in 2008.

Besides it is important to analyze significant differences before and during the crisis, in order to determine the position of banking performance, it is also important to look for factors that affect the performance of the banking sector itself. One important aspect of banking performance is earning or profitability. This is because the main objective of banking operations is to achieve the maximum level of profitability. This study uses earning ratio specifically ROA and ROE as dependen variabel since these two variables is best projection to assessing bank performance.

Our approach and results contribute to the extension of the bank performance determinants literature; Dietrich & Wanzenreid (2011); Alper & Anbar (2011); Masood & Ashraf (2012); Ahmad & Mitemilola (2014); Hermina & Suprianto (2014); Ahmad (2014); Yanuardi, Hadiwidjojo, & Sumiati (2014); Khoirunisa, Rodhiyah dan Saryadi (2016); Adelopo, Lloydking dan Tauringana (2018); Inrawan, Silitonga, dan Sudirman (2020). the result of previous literature shows mixed conclusion. therefore, we want to explore more the determinants of bank performance, especially in case of Covid-19 period.

In examine at the difference, we use CAMEL ratio specifically Capital Adequacy Ratio (CAR) in explaining Capital, Non-Performing Loans (NPL) in explaining Asset Quality, Operational Expense & Operating Income (OEOI) in explaining Management, Return on Assets (ROA) in explaining Earning, and Loan to Deposit Ratio (LDR) in explaining Liquidity. In Examine the determinants, we use ROA and ROE as dependent variables which are assumed can describe banking performance. Then, independent variables are predicted to have an influence on profitability in accordance with theory and empirical are

bank specific variables (Bank Size, CAR, NPL, LDR, OEOI and Interest Rates) and macroeconomic variables (inflation and GDP/GRDP growth, and dummy variable of Economic Crisis).

In various previous studies, there are different arguments and research gap phenomena on the results and conclusions given by various researchers. Furthermore, when viewed from the graph of the development of banking performance ratios, especially conventional commercial banks as reflected in the CAMEL ratio, there is no sharp difference in the period before and during the crisis which contradicts the Bank Panic theory which states that banking performance will weaken in times of crisis and the trust crisis experienced by the community due to government intervention in the banking industry. Therefore, we are interested in further researching the difference in the significance of banking performance, especially in government-owned banks, and the factors that influence it by comparing the periods before and during the crisis due to Covid-19 in Indonesia.

2. Literature Review

As stated above, besides being important to analyze the significant differences before the crisis and during the crisis in order to determine the position of banking performance, it is also important to look for factors that affect the performance of the banking system itself. Banking performance can be seen from various aspects of banking health assessment, one of the important aspects of banking performance is Earning or profitability/profitability ratio. This is because the main objective of banking operations is to achieve the maximum level of profitability.

Banking performance on the aspect of profitability or the ability of banks to generate profits is important and will be used as the dependent variable that describes banking performance in this study. The profitability aspect is an aspect to assess the company's ability to seek profit or profit within a certain period (Kasmir, 2014). This aspect also provides a measure of the level of management effectiveness of a company which is indicated by the profit generated from sales or from investment income. Banking performance in the form of profitability/profitability aspects can be measured and reflected based on the ratio of Return on Assets (ROA), Return on Equity (ROE) and Net Interest Margin (NIM).

The assessment of banking performance covers all operational and non-operational aspects of the bank. Mishkin (2017) states that banking performance can be seen from its main goal, namely how banks operate to get the highest profit potential. Based on the basic operations or business management of a bank, the main focus is on four main things, namely:

1. Liquidity management, where the bank ensures that it has sufficient cash to pay depositors who will take their funds

2. Asset management, where the bank must pursue a low level of risk by acquiring assets that have low risk and diversifying asset ownership

3. Liability management, where the bank pays attention to how to get funds at a low cost.

4.   Capital adequacy management, where the bank must decide the amount of capital that must be managed and obtain the required amount of capital.

Bank performance has two important indicators and dimensions, namely quantity and quality indicators. The measure of banking profitability can be reflected through the ratio of ROA, ROE, and NIM. Furthermore, the measure of risk can be reflected through the ratio of LDR and CAR. Kasmir (2014) states that one of the measuring tools that can be used to determine the condition or position of a bank is known as CAMEL analysis. Basically, this bank soundness assessment analysis is an analysis of financial performance which is regulated in accordance with Bank Indonesia regulations. This analysis consists of aspects of capital, assets, management, earnings, and liquidity. With the CAMEL ratio analysis, it can be seen a good picture of the bad condition or position of the banking performance. The banking performance ratios in the CAMEL ratio analysis include Capital Adequacy Ratio (CAR) in explaining aspects of Capital, Non-Performing Loan (NPL) in explaining aspects of Asset Quality, Operating Costs & Operating Income (BOPO) in explaining aspects of Management, Return on Assets (ROA) in explaining the Earning aspect, and Loan to Deposit Ratio (LDR) in explaining the Liquidity aspect.

A hypothesis is a provisional assumption that must be verified for a research conducted in order to make it easier to analyze it. The hypotheses in this study are as follows:

Ha   : There are differences in the financial performance of government-owned conventional commercial banks before the crisis and during the crisis due to Covid-19.

H1A : Bank Size has a positive and significant effect on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H1B : Bank Size has a positive and significant effect on ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

H2A : CAR has a positive and significant effect on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H2B : CAR has a positive and significant effect on ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

H3A : NPL has a negative and significant effect on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H3B : NPL has a negative and significant effect on ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

H4A : BOPO has a negative and significant effect on ROA at government-owned conventional commercial banks before and during the COVID-19 crisis.

H4B : BOPO has a negative and significant effect on ROE at government-owned conventional commercial banks before and during the COVID-19 crisis.

H5A : LDR has a positive and significant effect on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H5B : LDR has a positive and significant effect on ROE at government-owned conventional commercial banks before and during the COVID-19 crisis.

H6A : Interest rates have a positive and significant effect on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H6B : Interest rates have a positive and significant effect on ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

H7A : Economic growth has a positive and significant impact on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H7B : Economic growth has a positive and significant impact on ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

H8A : Inflation has a negative and significant effect on ROA at government-owned conventional commercial banks before and during the COVID-19 crisis.

H8B : Inflation has a negative and significant effect on ROE at government-owned conventional commercial banks before and during the COVID-19 crisis.

H9A : The economic crisis due to Covid-19 has a negative and significant impact on ROA at government-owned conventional commercial banks before and during the crisis due to covid-19.

H9B : The economic crisis due to Covid-19 has a negative and significant impact on ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

H10 : CAR, NPL, BOPO, LDR, Economic Growth and Inflation together have a significant effect on ROA and ROE at government-owned conventional commercial banks before and during the crisis due to covid-19.

3. Methods

The research approach used in this paper is a quantitative research approach. Quantitative research is methods for testing certain theories by examining the relationship between variables (Creswell, 2009). Furthermore, this study uses comparative research, which is research conducted to compare the value of one variable with another in different time periods.

First, in order to capture the difference to comparing bank performance before and during crisis due to Covid-19, we use paired t-test to measure the difference. Secondly, in order to capture the determinants of bank performance before and during crisis, we use panel regression of 25 bank sample (5 government-owned banks and 21 regional development banks) from Indonesia conventional banks with a time span from Q1 2019 - Q4 2019 and Q1 2020 - Q3 2020. The determinant model that is formed can be seen as below.

$$ROA_{it} = \beta_1 LogA_{it} + \beta_2 CAR_{it} + \beta_3 NPL_{it} + \beta_4 LDR_{it} + \beta_5 OEOI_{it} + \beta_6 IR_{it} + \beta_7 EG_{it} + \beta_8 INF_{it} + \beta_9 EC_{it} + e_{it} \dots\dots(1)$$

$$ROE_{it} = \beta_1 LogA_{it} + \beta_2 CAR_{it} + \beta_3 NPL_{it} + \beta_4 LDR_{it} + \beta_5 OEOI_{it} + \beta_6 IR_{it} \beta_7 EG_{it} + \beta_8 INF_{it} + \beta_9 EC_{it} + e_{it} \dots\dots(2)$$

Where :
ROA   = Return on Assets

ROE   = Return on Equity
LnA   = Logarithm of Total Aset
CAR   = Capital Adequacy Ratio
NPL   = Non-Performing Loans
LDR   = Loan to Deposit Ratio
OEOI   = Operational Expense Operational Income
IR   = Interest Rate
GE   = Economic Growth
INF   = Inflation
EC   = Economic Crisis (Dummy)
e   = error term.

4. Results and Discussion

A. Difference of banking performance before and during crisis

Paired Sample t-test is used to test for difference or comparability, comparing whether there is a difference in the mean or average of the two pairs of data groups. The results of the paired sample t test on the five aspects of CAMEL ratio can be seen in these table below.

Table 1. Result of Paired T-test

Aspect	Variable	Mean		Corelation		Difference Test	
		Before	During	Corelation	Sig.	T test	Sig.(2-tailed)
Capital	CAR	21.2617	21.4473	0.700	0,00	-0.661	0,583
Assets	NPL	1.0592	1.0639	0.729	0,00	-0.065	0,708
Management	OEIO	77.6284	77.6975	0.555	0,00	-0.082	0,670
Earning	ROA	2.4036	2.4673	0.608	0,00	-0.715	0,645
Liquidity	LDR	82.2825	83.2860	0.720	0,00	-1.008	0,311
N = 175							

Based on the Paired Sample t-test table above, the significance value of all CAMEL aspects is obtained as a reflection of banking performance which is above the significant level of 0.05 (sig> 0.05). This means that H0 is rejected, or there is no difference in the average variable performance of banks in the period before and during the crisis due to Covid-19. Also the result showed that the t-test is negative, which means that the pre-crisis average was lower than the average during the crisis due to Covid-19. And finally, it was found that all the correlation values of the banking performance variables were strong and significant (correlation >0.50). This means that the variables of banking performance before the crisis had a strong correlation with banking performance during the crisis due to Covid-19.

B. Determinants of banking performance before and during crisis

In discussing the determinants of banking performance represented by the ROA (Y1) and ROE (Y2) variables, the direction of influence and significance of the independent variables on the dependent variable were used. Based on a series of model selection tests that have been carried out, the Fixed Effect model was selected to estimate the two panel data regression equations in this study. The estimation results of the Fixed effect model of the two equations can be seen below.

$$ROA_{it} = 11.09 - 0.95 LnA_{it} - 0.004\,CAR_{it} - 0.01\,NPL_{it} - 0.0008\,LDR_{it}$$
$$-0.09\,BOPO_{it} + 0.03\,IR_{it} + 0.009\,EG_{it} + 0,003\,INF_{it} + 0.21\,CE_{it} +$$
$$e_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(4)$$

$$ROE_{it} = 63.04 + 0.21\,LnA_{it} - 0.31\,CAR_{it} + 0.20\,NPL_{it} - 0.006\,LDR_{it}$$
$$- 0.62\,BOPO_{it} + 0.24\,IR_{it} + 0.01\,EG_{it} + 0.31\,INF_{it} + 1.37\,CE_{it} +$$
$$e_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(5)$$

The recapitulation of the results of the fixed effect tests that have been carried out on the two equations can be seen by table below.

Table 2. Simultaneous Test Result (*f-result*)

Uji Simultan	F-statistic	Prob.
Equation I (ROA)	50.93217	0.000000*
Equation II (ROE)	30.95516	0.000000*

Table 3. Coefficient of Determination Test Result (R^2)

Uji Koefisien Determinasi	*R-squared*	*Adjusted R-squared*
Equation I (ROA)	0.926672	0.908478
Equation II (ROE)	0.884035	0.855476

Significant at 5% level

Table 4. Recapitulation of the Direction & Significance of the Determinants of Banking Performance

Independent Variables	Equation I (ROA (Y1))		Equation II (ROE (Y2))	
	Determinant Direction	Significance	Determinant Direction	Significance
Ln Asset (X1)	Negative (-)	Significant	Positive (+)	Not Significant
CAR (X2)	Negative (-)	Not Significant	Negative (-)	Significant

Variabel	Equation I (ROA)		Equation II (ROE)	
	T-Statistic	Prob.	T-Statistic	Prob.
Ln Asset (X1)	5.536857	0.0003*	1.675169	0.9136
CAR (X2)	-3.722221	0.8281	0.108728	0.0116*
NPL (X3)	-0.217610	0.7811	-2.560236	0.4578
LDR (X4)	-0.278513	0.8114	0.744633	0.7477
OEIO (X5)	-0.239116	0.0000*	-0.322365	0.0000*
Interest Rate (X6)	-82.86900	0.0026*	-35.35761	0.0228*
Eco. Growth (X7)	3.071489	0.0072*	1.553102	0.5474
Inflation (X8)	2.727908	0.7719	0.603225	0.0295*
Eco. Crisis (X9)	0.290504	0.0000*	2.200690	0.0000*

NPL (X3)	Negative (-)	Not Significant	Positive (+)	Not Significant
LDR (X4)	Negative (-)	Not Significant	Negative (-)	Not Significant
OEIO (X5)	Negative (-)	Significant	Negative (-)	Significant
Interest Rate (X6)	Positive (+)	Significant	Positive (+)	Significant
Eco. Growth (X7)	Positive (+)	Significant	Positive (+)	Not Significant
Inflation (X8)	Positive (+)	Not Significant	Positive (+)	Significant
Eco. Crisis (X9)	Positive (+)	Significant	Positive (+)	Significant

The banking performance in the capital aspect, represented by the CAR ratio variable, showed that the average CAR ratio during the crisis was 21.45%, higher than the CAR ratio in the pre-crisis period, which was 21.26%. This means that on average the government-owned conventional commercial banks had higher capital adequacy during the crisis period. Or in other words, it can be said that the ability of banks to minimize the risk of losses to be faced and meet the needs of depositors and other creditors during the crisis is higher than before the crisis. With the value of Sig. 2 tailed is 0.583 which is greater than alpha 0.05 (0.583> 0.05), indicating that the CAR ratio that represents the aspect of Capital does not have a significant difference between the period before the crisis and during the crisis due to

Covid-19. This is in line with research conducted by Winarso (2008), which found no significant differences in aspects of capital before and during / after the crisis.

Assets aspect of banking performance represented by the NPL ratio variable showed that the average NPL ratio during the crisis was 1.0639%, higher than the NPL ratio in the pre-crisis period which was 1.0592%. This implies that the average government-owned conventional commercial banks experienced higher bad credit problems during the period during the crisis. Or in other words, it can be said that the unsuccessful credit paid by the public (debtor) to the bank (creditor) during the crisis is higher than before the crisis. With the value of Sig. 2 tailed of 0.708 which is greater than alpha 0.05 (0.708> 0.05), indicating that the NPL ratio representing the Assets aspect does not have a significant difference between the period before the crisis and during the crisis due to Covid-19. This is in line with research conducted by (Winarso, 2008), which found no significant differences in asset aspects before and during / after the crisis.

The management aspect of banking performance represented by the OEIO ratio variable showed that the average OEOI ratio during the crisis was 77.6975%, higher than the OEIO ratio in the pre-crisis period, which was 77.6284%. This means that the average government-owned conventional commercial bank has a problem of inefficient bank operations during the period during the crisis. Or in other words, it can be said that the operational costs incurred by the bank are higher than the operating income received by the bank during the crisis, which is higher than before the crisis. With the value of Sig. 2 tailed amounting to 0.670 which is greater than alpha 0.05 (0.670> 0.05), indicating that the OEIO ratio representing aspects of Management does not have a significant difference between the period before the crisis and during the crisis due to Covid-19. This is in line with research conducted by (Winarso, 2008), which found no significant differences in aspects of management before and during / after the crisis.

Earning aspect banking performance represented by the ROA ratio variable showed that the average ROA ratio during the crisis was 2.4673%, higher than the ROA

ratio in the pre-crisis period which was 2.4036%. This means that the average government-owned conventional commercial bank has a higher profitability during the period during the crisis. Or in other words, it can be said that the bank's net profit on the assets it owned during the crisis was higher than before the crisis. With the value of Sig. 2 tailed equal to 0.645 which is greater than alpha 0.05 (0.645> 0.05), indicating that the ROA ratio which represents the aspect of Earning does not have a significant difference between the period before the crisis and during the crisis due to Covid-19. This is in line with research conducted by (Winarso, 2008), which found no significant difference in aspects of earnings before and during / after the crisis.

The liquidity aspect of banking performance represented by the LDR ratio variable showed that the average LDR ratio during the crisis was 83.2860%, higher than the LDR ratio in the pre-crisis period, which was 82.2825%. This means that the average government-owned conventional commercial banks provide higher credit or loans during the crisis period. In other words, it can be said that the level of bank liquidity during the crisis was lower than before the crisis. With the value of Sig. 2 tailed of 0.311 which is greater than alpha 0.05 (0.311> 0.05), indicating that the LDR ratio that represents the Liquidity aspect does not have a significant difference between the period before the crisis and during the crisis due to Covid-19. This is in line with research conducted by (Winarso, 2008) which found no significant difference the liquidity aspect before and during / after the crisis.

Bank Size (LnAset) has a negative effect on the profitability of the ROA variable but is positive on the ROE variable. However, if viewed from the significant effect, Bank Size only has a significant effect on ROA. The direction of the negative relationship that occurs in the Bank Size variable on ROA and ROE can mean that a large bank or a bank that has large total assets has not been able to have an effect on profitability, because there are still bad credit problems and high operational costs that must be borne.

Banking is not proportional to the returns obtained. So it can be stated that the higher the size of a bank, it will have a significant effect and reduce the return on its assets. This is due to the higher the size of the bank, the greater the operational costs it must bear and the risks it will experience, so that it will further reduce the contribution of returns on assets and equity it owns. Flamini et al. (2009) in Adelopo et al (2018) stated that large banks have a tendency to gain abnormal profits in monopolistic competition, especially during times of uncertainty. This is because these large banks can charge higher loan interest rates and cause lower borrowing costs. The difference in the direction of the influence of the bank size on the profitability of ROA and ROE shows an empirical issue that has occurred in previous studies. Thus, results are often contradictory to the direction of influence of these two variables. The results of this study are in line with previous research conducted by Adelopo, Lloydking and Tauringana (2018), Alper & Anbar (2011), Masood & Ashraf (2012) who found that bank size or total assets has a significant effect on ROA.

CAR has a negative effect on ROA and ROE. However, if viewed from the significant effect, CAR has no significant effect on ROA, but has a significant effect on ROE. The direction of the negative relationship that occurs in the CAR variable on ROA and ROE can be interpreted as a bank that has a high capital adequacy ratio that has a

decreasing effect on profitability. CAR ratio shows the bank's capital adequacy in facing the risks that occur. Thus, the higher the CAR is expected to protect the bank from the various risks it will experience. However, a high CAR or high capital adequacy can reduce a bank's ability to expand its business. This is due to the increasing capital adequacy that the bank must reserve to avoid risk. So that the inhibition of business expansion caused by high CAR will slow down or reduce banking performance in generating profit (profitability). Coupled with the significant effect value, the increase in CAR is proven to have a significant effect on reducing ROE in the period before and during the crisis due to Covid-19. The results of this study are in line with previous research conducted by Adelopo, Lloydking and Tauringana (2018), Alper & Anbar (2011), Masood & Ashraf (2012), and Ahmad (2014) who found that CAR had no significant effect on ROA, and Masood & Ashraf (2012) who found that CAR has a significant effect on ROE.

NPL has a negative effect on ROA and positive on ROE. If seen from the significant effect, NPL has no significant effect on both ROA and ROE. The direction of the negative relationship that occurs in the NPL variable to ROA can be interpreted as a bank that has a ratio of bad loans or non-performing loans which will reduce profitability, especially return on assets. The high NPL ratio in the banking sector indicates the level of risk of bad credit or unpaid credit. Thus, the greater the bank's NPL, the lower the level of bank profit or profitability indicated by the ROA ratio. This is due to the increase in costs incurred by banks, namely the cost of the required Earning Asset Allowance (PPAP) to be higher. It was found that NPL had no significant effect on ROA, so it could be said that the effect was relatively small and even almost insignificant.

The insignificance of NPLs on banking performance is the impact of policies issued by the government. One of the policies issued by the Indonesian Government issued by the OJK in dealing with the impact of the crisis due to Covid-19 is credit restructuring. This policy aims to ensure that bank activities in channeling credit are not hampered by potential debtors who experience difficulties in fulfilling their credit obligations. This restructuring policy can take the form of a reduction in loan interest rates, an extension of the credit period, a reduction in loan interest arrears, etc. Through this policy, banks do not need to set aside reserves for the public (debtors). The direction of the positive relationship that occurs in the NPL variable on ROE can be interpreted as a bank that has high bad credit which has an effect on profitability, especially returns on equity or capital. However, it was found that NPL had no significant effect on ROE, so it could be said that the effect was relatively small and even almost insignificant. The results of this study are in line with previous research conducted by Adelopo, Lloydking and Tauringana (2018) and Dietrich & Wanzenried (2011) which found that NPL had no significant effect on ROA, as well as Hermina & Suprianto (2014) and Alper & Anbar (2011). who found that NPL had no significant effect on ROE.

LDR has a negative effect on ROA & ROE. If seen from the significant effect, LDR has no significant effect on both ROA and ROE. The direction of the positive relationship that occurs in the LDR variable to ROA means that a bank that has a high liquidity ratio will increase profitability, especially return on assets. The high liquidity of the bank is indicated by the low credit or loan that the bank has successfully channeled for its Third Party Funds (TPF). This implies that banks are less likely to experience bad credit

risk which can reduce their profits. However, it was found that LDR had no significant effect on ROA and ROE, so it could be said that the effect was relatively small and even almost insignificant. The results of this study are in line with previous studies conducted by Ahmad & Mitemilola (2014), Ahmad (2014) and Yanuardi (2014) who found that LDR had no significant effect on ROA, and Hermina & Suprianto (2014) and Alper & Anbar (2011).) who found that LDR had no significant effect on ROE.

OEIO has a negative effect on the profitability of the ROA and ROE variables. If seen from the significant effect, OEIO has a significant effect on both ROA and ROE. The direction of the negative relationship that occurs in the OEIO variable on ROA and ROE means that a bank that has good financial management will increase profits (profitability), especially returns on assets and equity / capital. The good financial management of a bank is indicated by the low operating costs that must be spent on the operating income it has accumulated. This suggests that the smaller the better financial management of a bank is indicated by the relatively small OEIO value. The small amount of banking operational expenditures will increase the profit or profitability obtained by the bank. Finally, it was found that OEOI had a significant effect on ROA and ROE, so it can be said that the effect was quite large and real. The results of this study are in line with previous research conducted by Adelopo, Lloydking and Tauringana (2018), Dietrich & Wanzenried (2011) Khoirunisa, Rodhiyah and Saryadi (2016), Ahmad (2014) and Yanuardi (2014) which found that OEIO has a significant effect. on ROA, as well as Dietrich & Wanzenried (2011), Khoirunisa, Rodhiyah and Saryadi (2016), and Hermina & Suprianto (2014) who found that OEOI has a significant effect on ROE.

Interest rates have a positive effect on the profitability of the ROA and ROE variables. When viewed from the effect of its significance, Interest Rates have a significant effect on ROA and ROE. The direction of the positive relationship that occurs in the interest rate variable on ROA and ROE means that high interest rates will increase profits (profitability), especially returns on assets and equity/capital. The classical theory states that interest is the price of loanable funds (investment funds). The interest rates attached to lending will generate income for the bank. People who borrow or make credit will return the funds they borrowed along with the interest that must be paid in accordance with the contract that has been agreed by both parties previously (debtor & creditor). Thus, as has been explained, interest rates will bring profits or bank profitability and provide returns on assets and equity / capital. Finally, it was found that Interest Rates have a significant effect on ROA & ROE. The results of this study are in line with previous research conducted by Alper & Anbar (2011) which found that interest rates have a significant effect on ROE.

Economic growth has a positive influence on the profitability of the ROA and ROE variables. When viewed from the effect of its significance, Economic Growth has a significant effect on ROA, but does not have a significant effect on ROE. The direction of the positive relationship that occurs in the Economic Growth variable on ROA and ROE means that the occurrence of economic growth will increase profits (profitability), especially returns on assets and equity / capital. An increase in economic activity or in other words, a stable economic growth, will lead to a favorable economic climate for debtors. This stable economic condition will then increase the debtor's profitability due to the increase in aggregate demand. The increase in the profitability or income of the debtor

will then increase the ability of the debtor to pay his obligations. So that in the end it will increase bank profitability or return on assets and equity / capital tires, which is obtained from the interest income margin paid by the debtor. The direction of positive influence also indicates that when there is a negative economic growth or in other words the economic climate is experiencing chaos, the banking performance will also be affected by experiencing a weakening level of profitability. Finally, it is found that Economic Growth has a significant effect on ROA, so that it can be said that the effect is quite large and real, but it does not have a significant effect on ROE, which can be said the effect is relatively small and almost not real. The results of this study are in line with previous research conducted by Ahmad & Mitemilola (2014) which found that economic growth has a significant effect on ROA.

Inflation has a positive effect on the profitability of the ROA and ROE variables. When viewed from the effect of its significance, inflation has a significant effect on ROE, but does not have a significant effect on ROA. The direction of the positive relationship that occurs in the Inflation variable on ROA and ROE means that the inflation that occurs will increase profits (profitability), especially returns on assets and equity / capital. Inflation does not always have a bad impact on the economy and even has a good impact if inflation is controllable and stable. Stable and controlled inflation will increase the enthusiasm for economic activity, thereby increasing the income of the community, especially debtors who use credit as investment. The increase in income due to stable inflation will then affect the ability of the community to pay credit, thus providing benefits for banks, namely returns on assets and equity / capital. The direction of the positive influence also indicates that when there is deflation or in other words the purchasing power of the public decreases, banking performance will be affected by experiencing a weakening level of profitability. Finally, it is found that inflation has a significant effect on ROE, so it can be said that the effect is quite large and real, but it does not have a significant effect on ROA, which can be said the effect is relatively small and almost insignificant. The results of this study are in line with previous research conducted by Alim (2014) and Adelopo, Lloydking and Tauringana (2018) who found that inflation has no significant effect on ROA.

The economic crisis has a positive influence on the profitability of the ROA and ROE variables. When viewed from the effect of its significance, the economic crisis has a significant effect on both ROA and ROE. The direction of the positive relationship that occurs in the crisis variable on ROA and ROE means that the economic crisis due to Covid-19 that occurs can increase profits (profitability), especially returns on assets and equity / capital. The economic crisis due to Covid-19 was marked by the contraction of economic activity in the last 2 quarters. The spread of Covid-19 requires all countries in the world to limit the mobility of people, so that various kinds of activities that cause crowds, crowds or groups must be limited or even postponed. Covid-19 has succeeded in having an impact with the occurrence of economic contraction, which is shown by the minus of economic growth in almost all provinces in Indonesia.

However, even though the economy was disturbed by a fairly high contraction, the presence of Covid-19 actually had a good impact on banking performance. This indicates that companies that use bank credit services provide better efficiency policies than before the Covid-19 period. In addition, it was found that the launching of the government

restructuring relaxation policy has provided leeway for the public in paying their obligations, as well as leeway for banks in calculating their credit collectability, so as to reduce credit risk experienced by banks. In addition, the bank is also trying to filter out credit for the public during the pandemic, so that all these steps and efforts have succeeded in reducing the risk of bad credit. Until now, researchers have not found an empirical study that discusses the significance of the economic crisis due to Covid-19 on bank profitability as reflected by the ROA and ROE ratios. Therefore, the authors hope this research can contribute to future studies that discuss the effects of the economic crisis due to Covid-19 on banking performance

5. Conclusions and Recommendations

This study was conducted to determine differences in banking performance as reflected by Capital, Assets, Management, Earning and Liquidity (CAMEL), where the Capital Adequacy Ratio (CAR) represents the aspects of Capital, Non-Performing Loan (LDR) represents aspects of Assets Quality, Operational Expenditure and Operating Income (OEOI) represent Management aspects, Return on Assets (ROA) represents Earning aspects, and Loan to Deposit Ratio (LDR) represents Liquidity aspects. The results of this study indicate that there is no significant difference to the performance of state-owned conventional commercial banks in Indonesia which is reflected by the CAMEL aspect which is represented by the CAR, NPL, OEIO, ROA and LDR ratios before the crisis and during the crisis due to Covid-19. When viewed from the average difference, the results show that the average ratio of CAR, NPL, OEOI, ROA and LDR during the crisis was higher than the average ratio before the crisis due to Covid-19.

Furthermore, this study is intended to find the determinants of banking performance represented by the aspect of earning (profitability) by using the ROA (Y1) and ROE (Y2) ratios as the dependent variable, which is assumed to describe banking performance in the period before and during the crisis due to Covid-19. we found only OEOI, Interest Rates and Economic Crisis have significant effect on bank performance that reflected by ROA & ROE. Simultaneously, all independent variables have significant effect on banking performance that reflected by ROA and ROE.

The banking sector is expected to maintain a good financial management climate, because the results of this study indicate that the OEOI ratio has a positive and significant effect on profitability, both ROA and ROE ratios. A low and controllable OEIO ratio can illustrate that there is good financial management in a banking institution. Thus, it will improve banking performance in generating profits, both return on assets for the banking sector itself, and return on equity / capital for the government as the owner of capital.

For future researchers to conduct further research on the determinants of banking performance, particularly the profitability aspect (ROA & ROE). in conventional commercial banks owned by the wider government by adding other independent variables and adding a longer time span in order to obtain better research results

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